

Work Order ID 57327

April 6, 2010 1:31:24 PM



Page 1

Item ID: D315-668-012

Accept



Setup Start

Revision ID:

Stop

Item Name: Skidtube RH

Start Date: 06/04/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 16/04/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: 11 Date: 10-4-06 Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start

Stop

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D2904

Rev B

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile & type labels per PPPD315-668-012

CHG 001

Handwritten: 10/06/21

Handwritten: 8/10/06/22

357327

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No. DQA _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Item ID: D315-668-012

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Setup Start



Revision ID:

Item Name: Skidtube RH

Stop



Start Date: 06/04/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 16/04/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start



Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

110



Skidtubes

Skidtubes

0.00

0.00

Memo

LANDING GEAR RESOURCE 1

1-Cut D2904b to length as per dwg D2904

M 10/4/13

2-Drill aft and fwd cap holes as per dwg D2904 using DT8025 jig
(DO NOT OPEN TO FINISH SIZE)3-Drill saddle holes (6 Deg) as per Dwg D2904 using DT8938A jig
(ENSURE THAT LOCATOR RING IS SET FOR RH TUBE)4-Drill GHW holes (3 Deg) as per Dwg D2904 using DT8938b jig
(ENSURE THAT LOCATOR RING IS SET FOR RH TUBE)5-Insert and cleco doublers and DT8938d in position. Transfer drill 256 holes
thru tube and doublers

6-Remove, identify batch # and orientation of doublers

7-C'sink rivet holes in tube 256 places as per dwg D2904 and deburr

8-Locate from saddle holes, drill wearplate holes using DT8994. Jig must be 1.7"
from aft end of tube (REF)9-Remove fwd and aft indexing ridges as per dwg D2904. Open fwd and aft cap
holes to finish size, scribe batch # at aft end of tube

10-Remove marks left from drill jig and deburr

DD 10-4-13

M 10/5/14

M 10/5/11

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Reference:

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Customer:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run

Start

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

120

QC5- Inspect part completeness to step on W/O

0.00

QC

Memo

0.00

Quality Control

130

Chemical Conversion Coat per QSI005 4.1
HandFinishing

0.00

HandFinish

Memo

0.00

Hand Finishing

Chemical Conversion Coat Tube & Doublers

140

QC3- Inspect Part Finish

0.00

QC

Memo

0.00

Quality Control

S 10/05/11

④

1 10/5/11

DP

10-5-11

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Start Date: 06/04/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 16/04/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

150



Skidtubes

Skidtubes

0.00

0.00

Memo

LANDING GEAR RESOURCE 1

1-Remove alodine around X-bolt holes on doublers

2-Rivet doublers as per dwg D2904.(DO NOT INSTALL RIVETS AROUND X-BOLT HOLES AT THIS TIME)

3-Open X-bolt spacer holes to finish size as per dwg D2904.(DO NOT USE CUTTING FLUID)

4-C'sink and deburr X-bolt spacer holes and prepare for welding

5-Blow all chips from inside tube.

6-Bond web in place per QSI 015. Allow 12 Hrs. cure time before cutting
Pick:

Qty ☐ Part Number ☐ Description ☐ Batch
A/R ☐ ☐ Sikaflex-291 ☐ 7113435 ☐

Sikaflex expire date: 10/1/13

Start Time: 9:00am Date: 10/5/12

Fin Time: _____ Date: _____

10/5/12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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Item ID: D315-668-012

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Item Name: Skidtube RH

Start Date: 06/04/2010 Start Qty: 1.00

Required Date: 16/04/2010 Req'd Qty: 1.00

Reference:

Cust Item ID:
Customer:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start
Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160 Skidtubes	Skidtubes	0.00							
Skidtubes	Memo	0.00							
	LANDING GEAR RESOURCE 1								
	1-Weld crossbolt spacers D2909as per Dwg. D2904and QSI 004. For D2579 spacers, weld one side, pass Y" drill, weld other side, pass Y" drill A/R□□□ Aluminum Rod								
	2-Grind welds as per Dwg D2909								
	3-Install remaining rivets arround X-bolt spacers, use rivet shaver as necessary								
	4-Deburr, inspect tube for any visible scratches								
170 QC	QC5- Inspect part completeness to step on W/O	0.00							
Quality Control	Memo	0.00							

BE 10/05/13

M 10/16/19

Subelog

(10)

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Cust Item ID:

Required Date: 16/04/2010 Req'd Qty: 1.00

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

180

QC10- Inspect visual per QSI004- ground welds

0.00



QC

Memo

0.00

Quality Control

Subtotal

0

190

Pressure Wash per QSI005 4.3

0.00



HandFinish

+recoat in as per PAR 09-043 => H 10/06/16

Memo

0.00

Hand Finishing

1 0

200

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00



Powdercoat

Memo

M1148411

0.00

Powder Coating

POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

*10:54
320°
11:25*

0 BR 10-6-16

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Cust Item ID:

Required Date: 16/04/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

210

QC3- Inspect Part Finish

0.00

⇒ 101062116



QC

Memo

0.00

Quality Control

X1

0

220

HandFinishing

0.00



HandFinish

Memo

0.00

Hand Finishing

HAND FINISHING RESOURCE #1

101062116

1

0

1-Install inserts & wearplates as per Dwg. D2904. Use a drop of Sikaflex on insert holes before installing wearplates

A/R ☐ ☐ ☐ Sikaflex-291 ☐ 14113519

Sikaflex expire date: 10/11

3-Inspect for foreign object per QSI 024

4-Install 2646 Aft & fwd Caps as per Dwg D2904 and seal with Sikaflex. Clean excess adhesive

A/R ☐ ☐ ☐ Sikaflex-291 ☐ 14113519

Sikaflex expire date: 10/14

5-Wing Walk as per Dwg D2904 and QSI 005

4.4

Batch: 14114432

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 57327

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Item ID: D315-668-012

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Setup Start



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Stop



Item Name: Skidtube RH

Start Date: 06/04/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 16/04/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
230 QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00	S 10/06/10			④			
240 Packaging Packaging	Identify as per dwg & Stock Location: _____ Memo NEVA	0.00 0.00				10/06/23 ④			
250 QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.00				10-6-23 ①			

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Page 1

Work Order ID: 57327

Parent Item: D315-668-012

Parent Item Name: Skidtube RH


Comments: IPP Rev:A New Issue 07-04-12 JLM

Start Date: 06/04/2010

Required Date: 16/04/2010


Start Qty: 1.00

Required Qty: 1.00


Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2904B  Skidtube, 315		Manufactured	No			110	Each	2.0000	1.0000			

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
LG	2	
31826	1	
36926	1	

B57330 4/10/4/13

D2910  Doubler		Manufactured	No			110	Each	44.0000	2.0000			
---	--	--------------	----	--	--	-----	------	---------	--------	--	--	--

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST030	44	
36927	44	

D2911  Doubler		Manufactured	No			110	Each	53.0000	2.0000			
--	--	--------------	----	--	--	-----	------	---------	--------	--	--	--

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST030	53	
36928	53	

2 4/10/5/14

2 4/10/5/14

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Page 2

Work Order ID: 57327

Parent Item: D315-668-012

Parent Item Name: Skidtube RH


Comments: IPP Rev:A New Issue 07-04-12 JLM

Start Date: 06/04/2010

Required Date: 16/04/2010

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
MS27039-1-08  Screw		Purchased	No			120	Each	1,958.000	54.0000			

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST291

1958

110552

44

110835

1914

D2912

Manufactured

No

150

Each

40.0000

2.0000



Doubler

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST030

40

36929

40

MS20601-AD4W3

Purchased

No

150

Each

228.0000

256.0000



Rivet

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST322

228

111359

28

113899

200

CR3212-403

M114450

M114436

PO

237168 M105/12

PTO

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Shop Packet Print

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Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D315-668-012 PAR #: _____ Fault Category: _____ NCR: Yes ☒ No ☐ DQA: [Signature] Date: 10/9/15
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR: <u>57327</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
10.09.15	110	MS20601AD403 RIVETS ARE BREAKING DURING INSTALLATION	<u>[Signature]</u> 10.09.15 per AS1642	USE CR3212 CR3212-4-03 RIVETS. FSHEAR = 240lb FOR MS20601 FSHEAR = 664lb FOR CR3212	<u>[Signature]</u> 10/9/15	<u>[Signature]</u>	<u>[Signature]</u> 10.09.15 per AS1642	<u>[Signature]</u> 10/06/05

NOTE: Date & initial all entries

CHERRYMAX® RIVET SELECTION

MECHANICAL PROPERTIES

Materials		Ultimate Shear Strength	Maximum Temperature
Sleeve	Stem		
5056 Aluminum	Alloy Steel	50,000 PSI	250°F
5056 Aluminum	CRES	50,000 PSI	250°F
Monel	CRES	75,000 PSI	900°F
Inco 600	Inco X-750	75,000 PSI	1400°F

MINIMUM RIVET SHEAR & TENSILE STRENGTH (LBS.) IN STEEL COUPONS

RIVET DIAM.	SHEET THICK.	SINGLE SHEAR					TENSILE						
		ALUMINUM		MONEL		INCO	ALUMINUM		MONEL		INCO		
		Nom.	O/S	Nom.	O/S	O/S	Nom.	O/S	Nom.	O/S	O/S		
		3212	3242	3522	3552	3852	3212	3214	3242	3522	3524	3552	3852
		3213	3243	3523	3553	3853	3213	3224	3243	3523		3553	3853
		3214	3245	3524	3555			3222		3245		3555	
		3222	3246		3556			3223		3246		3556	
		3223	3252							3252			
		3224	3253							3253			
			3255							3255			
1/8 (-4)	2x.156	664	814	995	1220	1220	285	250	345	400	360	490	570
5/32 (-5)	2x.187	1030	1245	1545	1865	1865	445	390	530	635	555	740	860
3/16 (-6)	2x.219	1480	1685	2215	2525	2525	635	560	710	890	800	1000	1160
1/4 (-8)	2x.281	2615	2925	3920	4390	4390	1125	1000	1260	1570	1410	1755	2030

Values shown are fastener capabilities only. Design values will be limited by the bearing strength of the sheet material used.

GAGES

269C3 GRIP GAGE

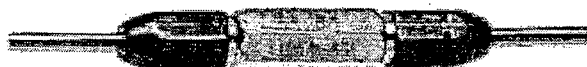
NATIONAL STOCK NUMBER 5210-00-255-7544

A simple, self-explanatory gage for determining material thickness and proper rivet grip length.



T-172 RIVET HOLE SIZE GAGE

These are precision ground, go no-go gages used to check holes drilled for CherryMAX® rivets. They are made in both nominal and oversize rivet diameters.



RIVET DIAMETER	GAGE NUMBER	NATIONAL STOCK NO.	RIVET DIAMETER	GAGE NUMBER	NATIONAL STOCK NO.
1/8" Nominal	T-172-4	5220-00-478-4135	1/8" Oversize	T-172-400	5220-00-478-4137
5/32" Nominal	T-172-5	5220-01-021-3276	5/32" Oversize	T-172-500	5220-00-478-4140
3/16" Nominal	T-172-6	5220-00-478-4136	3/16" Oversize	T-172-600	5220-00-478-4141
1/4" Nominal	T-172-8	5220-00-478-4139	1/4" Oversize	T-172-800	5220-01-374-1340

ATTENTION

Blind rivets are not always a suitable substitute for solid rivets. Maintenance personnel are reminded that AC 43.13-1A chapter 2, section 3 stipulates: "Do not substitute hollow rivets for solid rivets in load carrying members without specific approval of the application by a representative of the Federal Aviation Administration. Blind rivets may be used in blind locations in accordance with the conditions listed in Chapter 5, provided the edge distances and spacings are not less than the minimum listed in paragraph 99d."

Picklist Print

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Work Order ID: 57327

Parent Item: D315-668-012

Parent Item Name: Skidtube RH



Comments: IPP Rev:A New Issue 07-04-12 JLM

Start Date: 06/04/2010

Required Date: 16/04/2010

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2905 		Manufactured	No			160	Each	0.0000	1.0000			
Web, 315 Skidtube ALS4-1032-130 		Purchased	No			220	Each	40.0000	50.0000			
Insert												

B57333 D M 7/5/12

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST282

110511

40

40

M 114651

X50 M 10/06/16

AN960JD10L

Purchased

No

220

Each

4,693.000 54.0000

Washer

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST348

110985

4693

4693

X54 M 10/06/16

April 6, 2010 1:31:29 PM

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Page 3

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Page 4

Work Order ID: 57327



Parent Item: D315-668-012



Parent Item Name: Skidtube RH



Comments: IPP Rev:A New Issue 07-04-12 JLM

Start Date: 06/04/2010

Required Date: 16/04/2010

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2646  Aft Cap		Manufactured	No			220	Each	35.0000	2.0000			

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

FP6

28

B57332

X2 10/06/16

52663

28

Main Warehouse

fp7

7

52663

7

D2648-3



Manufactured No

220

Each

40.0000

5.0000



Wearpad

Warehouse

Loc Qty

Loc Code

Location

OFFSHORE

FG

12

45316

12

Main Warehouse

FP17

28

52516

28

X5 10/06/16

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Page 4

W/O:		WORK ORDER CHANGES					
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Page 5

Work Order ID: 57327

Parent Item: D315-668-012

Parent Item Name: Skidtube RH



Comments: IPP Rev:A New Issue 07-04-12 JLM

Start Date: 06/04/2010

Required Date: 16/04/2010

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2656-13  Wearplate		Manufactured	No			220	Each	15.0000	1.0000 			

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

FP20

12

55454

12

Main Warehouse

MEZZ

3

44158

3

D2656-33



Wearplate

Manufactured No

220

Each

22.0000

1.0000


Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

MEZZ

22

43806

9

46167

13

X1 10/06/10

X1 10/06/10

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Page 5

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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Picklist Print

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Page 6

Work Order ID: 57327



Parent Item: D315-668-012



Parent Item Name: Skidtube RH


Start Date: 06/04/2010

Required Date: 16/04/2010

Comments: IPP Rev:A New Issue 07-04-12 JLM

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2907  Wearshoe		Manufactured	No			220	Each	32.0000	1.0000			

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

FP

32

32

14654

X 10/06/10

D2909



Spacer, Lama

Manufactured No

220

Each

129.0000

11.0000

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

LG

129

12947

13

14091

116

11 BE 10/05/13

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Page 6

W/O:		WORK ORDER CHANGES					
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CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D2904	Rev. B SHEET 1 OF 3
DATE 00.06.21		TITLE SA 315B SKIDTUBE ASSEMBLY	SCALE NTS
A	99.09.09	NEW ISSUE	
B	00.06.21	CHANGED ANGLES FOR HOLES	

PARTS LIST:

Qty -041	Qty -042	Part Number	Description
X		D2904-041	LH SKIDTUBE ASSEMBLY
	X	D2904-042	RH SKIDTUBE ASSEMBLY
2	2	D2646	CAP
4	4	D2648-3	WEARPAD
1	1	D2648-5	WEARPAD
1	1	D2656-13	WEARSHOE
1	1	D2656-33	WEARSHOE
1		D2904-1	SKIDTUBE
	1	D2904-2	SKIDTUBE
1	1	D2905	WEB
1	1	D2907	WEARSHOE
11	11	D2909	CROSS BOLT SPACER
2	2	D2910	SKIDTUBE DOUBLER
2	2	D2911	SKIDTUBE DOUBLER
2	2	D2912	SKIDTUBE DOUBLER
50	50	ALS7-1032-130 or AKS4-1032-130 or ALS4-1032-130 or ALS7-1032-130	INSERT
54	54	AN960JD10L	WASHER
256	256	MS20601AD4W3	RIVET
54	54	MS27039-1-08	SCREW

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WORK ORDER
NO. 57322

BS-10-4-05

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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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CHECKED #	APPROVED #	DRAWING NO. D2904	Rev. B SHEET 2 OF 3
DATE 00.06.21		TITLE SA 315B SKIDTUBE ASSEMBLY	SCALE 1:20

w/o 57327

GENERAL NOTES:

1. TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
2. MAKE D2904-1 AND D2904-2 FROM D2914 EXTRUSION (INITIAL LENGTH = 142.0).
3. DAMAGE TOLERANCE ON BENDING:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 7 INCHES ABOVE THE GROUND. NO GOUGING IS ACCEPTABLE IN THE FLAT PORTION OF THE TUBE. GOUGES UP TO 0.020 ARE ACCEPTABLE IN THE BENT PORTION OF THE TUBE. TUBE O.D. SHOULD BE 3.150 ± 0.010 IN THE FLAT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
4. ALL HOLES DRILLED ON CENTERLINES EXCEPT THOSE NOTED BY SECTION C-C.
5. DRILL #30 HOLES ($\varnothing 0.128$ REF) TO LINE UP WITH $\varnothing 0.128$ HOLES IN D2910/D2911/D2912 DOUBLERS. C'SINK $\varnothing 0.239 \times 100^\circ$.
6. BOND D2905 WEB INTO D2904-1 (OR D2904-2) OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/291 ADHESIVE PER DART QSI 015. ENSURE HOLES LINE-UP.
7. WELDING TO BE DONE PER DART QSI 004.
8. AFTER DRILLING, BENDING, AND INSTALLING WEB & DOUBLERS, PERFORM THE FOLLOWING FOR $\varnothing 0.500$ HOLES ONLY:
 - CHAMFER HOLE $0.050 \times 45^\circ$
 - INSERT D2909 SPACER (11 PLACES)
 - WELD INTO PLACE
 - GRIND FLUSH
 - DRILL-OUT SPACER TO $\varnothing 0.406$
9. FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:
 - MINIMUM YIELD TENSILE STRENGTH = 35 ksi
 - MINIMUM ULTIMATE TENSILE STRENGTH = 38 ksi
10. FINISH:
 - ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1 PRIOR TO INSTALLING D2905 WEB AND D2910/D2911/D2912 DOUBLERS.
 - POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
 - BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005 4.4 (OPTIONAL).
11. DRILL $\varnothing 0.297$ FOR ALS7-1032-130 INSERT USING DT8395 BEFORE FINISH. INSTALL ALS7-1032-130 INSERTS AFTER FINISH.

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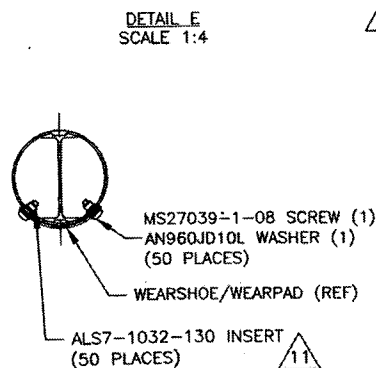
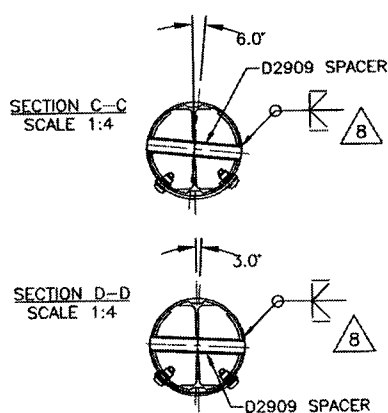
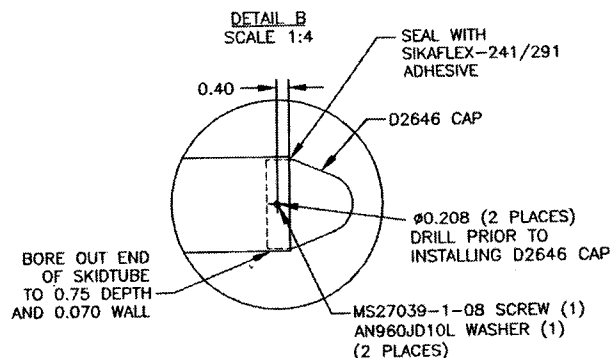
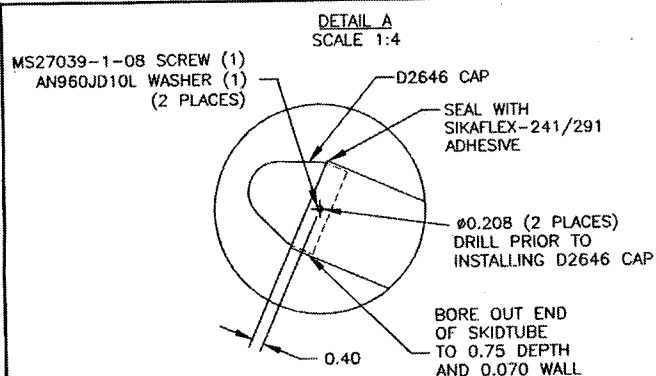
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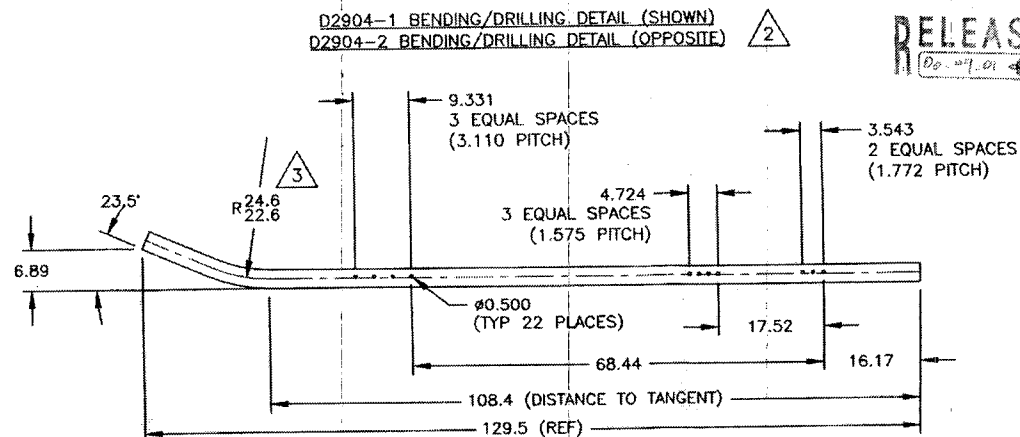
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w/o 57327

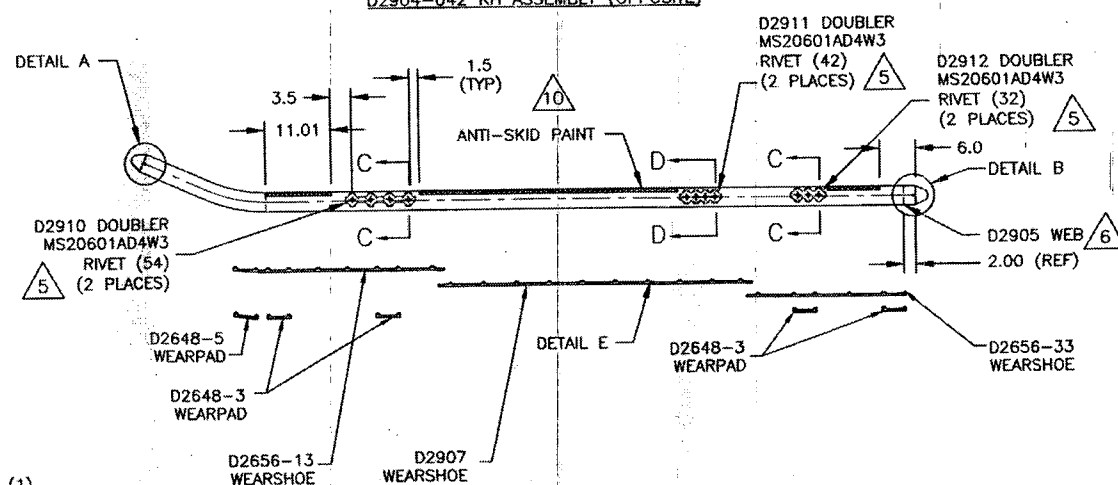
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D2904-1 BENDING/DRILLING DETAIL (SHOWN)
D2904-2 BENDING/DRILLING DETAIL (OPPOSITE)



D2904-041 LH ASSEMBLY DETAIL (SHOWN)
D2904-042 RH ASSEMBLY (OPPOSITE)



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		DATE 00.06.21		TITLE SA 315B SKIDTUBE ASSEMBLY	

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NO. 152

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Eliot
Job number: B36849
Part number: A315668011
Description: Skid tube (Lama)
Welding Process: Tig[☒] Mig[]
Base material: Aluminum
Current: AC[☒] DC[]

TEST REQUIREMENTS AND RESULTS

Visual:

pass[☒] fail[]

Penetration:

pass[☒] fail[]

UNACCEPTABLE

Cracks:

pass[☒] fail[]

Undercut:

pass[☒] fail[]

Pin holes:

pass[☒] fail[]

Overlap (cold lap)

pass[☒] fail[]

Porosity (surface):

pass[☒] fail[]

Coloration:

pass[☒] fail[]

Qualifier David Lund

Date of Test Coupon 08/04/24

Welder Barclay Eliot

Date of Test Coupon 08/04/24

The above named individual is qualified in accordance with AWS D17.1.2001 to weld